WHAT IS CLAIMED IS:

1. A water-based ink comprising a colorant and a water-insoluble polymer having at least two hydroxyl groups at its end.

2. The water-based ink according to claim 1, wherein the hydroxyl group existing at the end of the water-insoluble polymer is derived from a chain transfer agent having at least two hydroxyl groups.

3. The water-based ink according to claim 2, wherein the chain transfer agent is a mercapto-group containing chain transfer agent.

4. The water-based ink according to claim 1, wherein the colorant is at least one of a pigment and a dye.

5. The water-based ink according to claim 2, wherein the chain transfer agent is 3-mercapto-1,2-propanediol or 1-thio-β-D-glucose.

6. The water-based ink according to claim 1, wherein the colorant is contained in particles of the water-insoluble polymer having at least two hydroxyl groups at its end.

7. A water-based ink comprising a water-insoluble polymer having an ionic group at its end and a pigment.

8. The water-based ink according to claim 7, wherein the ionic group is an ionic group derived from at least one member selected from the group consisting of a chain transfer agent having an ionic group, a polymerization initiator having an ionic group, and an iniferter having an ionic group and the functions of the chain transfer agent and the polymerization initiator.

9. The water-based ink according to claim 7, wherein the chain transfer agent having an ionic group is at least one member selected from the group consisting of thioglycollic acid, mercaptopropionic acid and mercaptosuccinic acid.

10. The water-based ink according to claim 7, wherein the water-based ink comprises an aqueous dispersion of particles of pigment-containing water-insoluble polymer having an ionic group at its end.

11. The water-based ink according to any one of claims 1 to 10, wherein the water-insoluble vinyl polymer is obtained by copolymerizing a monomer mixture comprising (A) a salt-forming group-containing monomer, (B) a macromer, and (C) a monomer copolymerizable with the salt-forming group-containing monomer and the macromer.

12. The water-based ink according to claim 11, wherein the monomer mixture further comprises at least one monomer selected from the group consisting of (D) a hydroxyl group-containing monomer, and (E) a monomer represented by the formula (I):

$$CH_2C=C(R^1)COO(R^2O)_pR^3 \qquad (I)$$

wherein R^1 is a hydrogen atom or a lower alkyl group having 1 to 5 carbon atoms; R^2 is a divalent hydrocarbon group having 1 to 30 carbon atoms which optionally has a hetero atom; R^3 is a hydrogen atom or a monovalent hydrocarbon group having 1 to 30 carbon atoms which may have a hetero atom; and p is a number of 1 to 60.

13. A process for preparing a water-based ink, comprising dissolving a water-insoluble polymer having an ionic group at its end or at least two hydroxyl groups at its end in an organic solvent; adding a pigment, water and a neutralizing agent, and optionally a surfactant to the resulting solution; kneading the mixture to form a paste; diluting the paste with water as occasion demands; and distilling off the organic solvent to make it into a water-based system.